THE LIFE HISTORY OF THE SCIRON SKIPPER *TRAPEZITES SCIRON SCIRON* WATERHOUSE AND LYELL (LEPIDOPTERA: HESPERIIDAE: TRAPEZITINAE)

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Abstract

The life history of the sciron skipper *Trapezites sciron sciron* is described and illustrated. *Lomandra caespitosa* (Benth.) Ewart (Dasypogonaceae) and *Acanthocarpus canaliculatus* A. S. George (Dasypogonaceae) are recorded as foodplants.

Introduction

Trapezites sciron sciron is distributed in southern Western Australia from Perth to the Stirling Range and east to Cocklebiddy; there is a single annual generation, and adults have been taken from October to December (Common and Waterhouse 1981). R.W. Hay was the first to locate the early stages, on *Acanthocarpus canaliculatus* (Dasypogonaceae), and two larvae were subsequently reared to adult on this plant by P. Hutchinson. The life history was previously unrecorded.

Foodplants and life history

Foodplants: *Lomandra caespitosa* and *Acanthocarpus canaliculatus*.

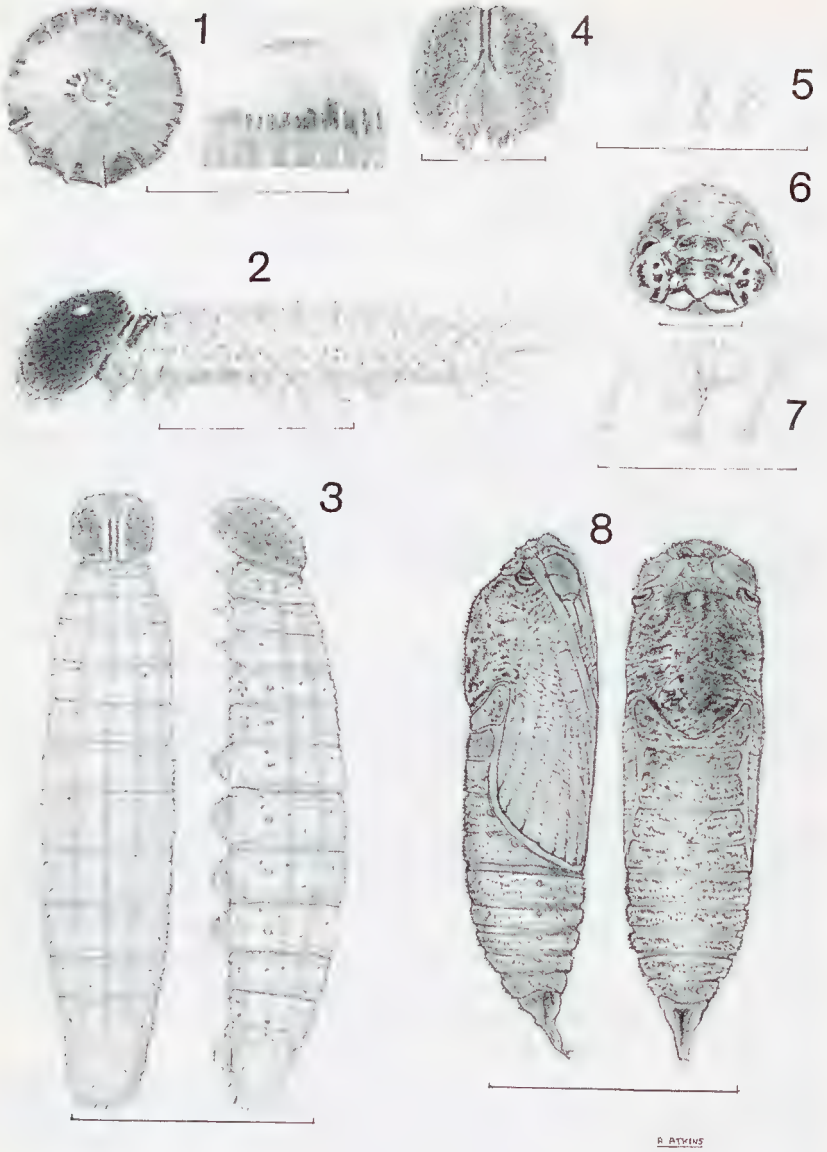
Egg (Fig. 1). Diam. 1.0 mm, hemispherical, with 17-19 prominent vertical ribs; cream coloured and unmarked when first laid but within a few days developing a series of red markings laterally and on the micropyle.

Larva. 1st instar (Fig. 2). Length 2.5 mm, head shiny black, prothoracic plate black. Body translucent, light brown, with a few long posterior setae, no prominent markings. 2nd-5th instars (Figs. 3-5). Length 3.8 - 25 mm. Body pale light brown in 2nd and 3rd instars, greyish brown in 4th and 5th instars, with a dark dorsal line and a pair of dorso-lateral lines extending the length of the body. The area between the paired dorso-lateral lines is lighter in colour than the rest of the body. Head capsule rugose, light brown with dark brown central band on medial suture, adfrontal sutures marked with paired longitudinal dark brown bands diverging ventrally.

Pupa (Figs. 6-8). Length 18 mm, cylindrical and tapering markedly towards cremaster; head, thorax and wing cases variable in colour from light brown to black, abdomen variably light to dark brown, banded with light brown; dorsal and lateral surfaces bearing numerous white setae.

Observations and Discussion

Adults of *T. s. sciron* were observed in banksia woodland at Koondoola and Alexander Heights, 13 km north of Perth, Western Australia in October 1989. The early stages were located when a female was observed to oviposit on *L. caespitosa*. Further eggs were found deposited on the leaves of this plant, a



Figs 1-8. Life history of *Trapezites sciron sciron* Waterhouse and Lyell: (1) egg (scale line = 1.0 mm); (2) 1st instar larva (scale line = 1.0 mm); (3) mature larva (scale line = 10.0 mm); (4) larval head (scale line = 2.0 mm); (5) larval setae (scale line = 0.25 mm); (6) frons of pupa (scale line = 2.0 mm); (7) pupal setae (scale line = 0.25 mm); (8) pupa (scale line = 10.0 mm).

few centimetres above ground level. These were collected, and resulting larvae placed on foodplants conveniently located for observation. Larvae were also obtained from remnant vegetation on vacant residential land at Alexander Heights.

On *L. caespitosa* early instar larvae rest head upwards in shelters formed at the base of the plant by drawing a few leaf blades together with silk. At third instar this shelter is abandoned and a new one constructed, usually in the rolled edge of a dead leaf near the base of the foodplant, but occasionally in detritus and sand grains and partially buried in soil at the base of the foodplant. Shelters may be attached to the foodplant, or up to 20cm distant and attached to debris on the ground; this may prevent the leaf from being blown away. Pupation occurs within the shelter.

Larval feeding occurs at night. 1st instar larvae consume the epidermis on the edge of the leaves, but feeding by later instars produces obliquely cut-off leaf tips characteristic of this genus (Common and Waterhouse, 1981). Larvae attain 4th instar by April, continue to feed at a reduced rate during winter and pupate in August and September. At Alexander Heights and Koondoola adults emerge in September and October and have been observed as late as November.

Our observations suggest that young, vigorously growing *L. caespitosa* which had regrown after fire or some other physical disturbance were preferred for oviposition.

On *A. canaliculatus*, only shelters attached to the foodplant have been observed. These consist of a mixture of foodplant and detrital material, including fallen leaves.

The early stages of *T. s. sciron* are typical for this genus and similar to those of *T. l. luteus* (Tepper) and *T. s. eremicola* Burns (see Fisher 1978, 1984). The record of *T. s. sciron* on *A. canaliculatus* at Kelmscott, 15 km south of Perth, is the first record of a *Trapezites* sp. feeding on a plant other than a species of *Lomandra*. *A. canaliculatus* was until recently (George 1986) regarded as conspecific with *A. preissii* Lehm., foodplant of the related *Anysintoides argenteoornatus* (Hewitson).

Note

Specimens relevant to the material presented in this paper are lodged in the W. A. Department of Conservation and Land Management Insect Collection.

Acknowledgements

Greg Keighery of the Department of Conservation and Land Management identified *L. caespitosa* and staff of the W.A. Herbarium identified *A. canaliculatus*. We thank R.W. Hay and P. Hutchison for assistance.

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